Draft Environmental Assessment
For Issuance of Permit No. 17324 for
the Importation of Beluga Whales for Public Display Purposes

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Location:	Permanent Captivity of beluga whales at the Georgia Aquarium, Atlanta, GA; Shedd Aquarium, Chicago, IL; Sea World of Florida, Orlando, FL; Sea World of Texas, San Antonio, TX; and Sea World of California, San Diego, CA.

Abstract: The National Marine Fisheries Service (NMFS) proposes to issue a public display permit to the Georgia Aquarium, Inc. (GAI) for the importation of 18 beluga whales from the Utrish Marine Mammal Research Station (UMMRS), Russia, pursuant to the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 et seq.). These beluga whales would become part of GAI's inventory of marine mammals. These animals would be distributed pursuant to breeding loan agreements among other U.S. beluga whale holders, including Shedd Aquarium, Sea World of Florida, Sea World of Texas, and Sea World of California. The permit would be valid for five years from the date of issuance.

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1.0 PURPOSE OF AND NEED FOR ACTION

Proposed Action
NMFS proposes to issue a public display permit that authorizes the importation of eighteen (18) beluga whales to the Georgia Aquarium, Inc. (File No. 17324) pursuant to the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 *et seq*.) and the regulations governing the taking, importing, and exporting of marine mammals (50 CFR 216).

Purpose of and Need for Action: The MMPA prohibits the import of marine mammals with only a few specific exceptions. The applicable exception in this case is an exemption for public display under Section 104 of the MMPA.

The purpose of the permit is to provide the applicant with an exemption from the import prohibitions under the MMPA for public display that is consistent with the MMPA issuance criteria.

The need for issuance of the permit is related to NMFS's mandate under the MMPA. Specifically, NMFS has a responsibility to implement the MMPA for those marine mammal species under its jurisdiction. Permit issuance criteria require that public display activities are consistent with the purposes and policies of the MMPA and will not have a significant adverse impact on the species or stock.

In order for the Office Director to issue any permit for public display under the MMPA, certain issuance criteria (50 CFR 216.34) must be met and the applicable criteria are summarized below. The applicant must demonstrate that:

- the proposed activity is humane and does not present any unnecessary risks to the health and welfare of marine mammals;
- the proposed activity is consistent with other applicable regulations, specifically 50 CFR 216.35 (permit restrictions);
- the proposed activity by itself or in combination with other activities, will not likely have a significant adverse impact on the species or stock;
- whether the applicant's expertise, facilities, and resources are adequate to accomplish successfully the objectives and activities stated in the application;
- if a live animal will be held captive or transported, the applicant's qualifications, facilities, and resources are adequate for the proper care and maintenance of the marine mammal; and
- any requested import or export will not likely result in the taking of marine mammals or marine mammal parts beyond those authorized by the permit.

The Office Director will also consider the opinions or views of scientists or other persons or organizations knowledgeable of the marine mammals that are the subject of the application or of other matters germane to the application.

In addition to meeting the permit issuance criteria listed above, the applicant must also demonstrate that the marine mammals proposed for importation were not (50 CFR 216.12):

- pregnant at the time of taking;
- nursing at the time of taking, or less than eight months old, whichever occurs later;
- taken from a species or stock designated as depleted; or
- taken in a manner deemed inhumane by the Secretary of Commerce.

Scope of Environmental Assessment (EA): This EA focuses primarily on the effects of the proposed action: providing authorization to import 18 beluga whales from Russia to the Georgia Aquarium, Shedd Aquarium, Sea World of Florida, Sea World of Texas, and Sea World of California.

The National Oceanic and Atmospheric Administration (NOAA) has, in NOAA Administrative Order 216-6 (NAO 216-6; 1999), listed issuance of permits for public display as a category of actions that "do not individually or cumulatively have a significant effect on the human environment…" and which therefore do not require preparation of an EA or environmental impact statement (EIS).

There is no evidence from prior analyses of the effects of permit issuance that issuance of permits for importation of marine mammals for the purposes of public display results in adverse effects on stocks or species. Nevertheless, NMFS has prepared this EA, with a more detailed analysis of the potential for adverse impacts on the species resulting from the importation of 18 beluga whales, to assist in making the decision about permit issuance under the MMPA.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

Alternative 1- No Action

Under the No Action alternative, Permit No. 17324 would not be issued and the applicant would not receive an exemption from the MMPA prohibition against import. The applicant would not conduct the proposed action in the absence of a permit.

Alternative 2 – Proposed Action (Issuance of permit with standard conditions)

Under the Proposed Action alternative, a five-year permit would be issued for importation of 18 beluga whales from UMMRS to the United States, as described in the application. The permit would include terms and conditions standard to such permits issued by NMFS.

The beluga whales would be imported to the Georgia Aquarium and to four other U.S. marine mammal facilities under breeding loans (Shedd Aquarium, Sea World of Florida, Sea World of Texas, and Sea World of California). The Georgia Aquarium, Shedd Aquarium, Sea World of Florida, Sea World of Texas and Sea World of California currently maintain facilities that house beluga whales. These facilities are open to the public on a regularly scheduled basis with access that is not limited or restricted other than by charging an admission fee. They are all members of the Alliance of Marine Mammal Parks and Aquariums and the Association of Zoos and Aquariums which offer educational programs based on professionally recognized standards. All these facilities hold Exhibitor's Licenses issued by the U.S. Department of Agriculture under the Animal Welfare Act (AWA; 7 U.S.C. §§ 2131 - 59).

Specific information is available in the application on file for the proposed action. The following is a summary of the applicant's request:

The importation of the animals would include transport by land from UMMRS to the Anapa Airport in Russia where they would be flown to Liege Airport, Belgium. From Liege Airport, the animals would be transferred to different aircraft for the flights to Atlanta Hartsfield (ATL) International Airport and Chicago O'Hare (ORD) International Airport, respectively. Table 1 outlines the anticipated distribution of the whales to be imported under this action.

Table 1: Distribution of Imported Belugas[1]

Receiving Facility	Number of Animals	Facility Airport	Importing Airport
Shedd Aquarium	4	Chicago	Chicago
Sea World of California	3	San Diego	Chicago
Georgia Aquarium	3	Atlanta	Atlanta
Sea World of Texas	6	San Antonio	Atlanta
Sea World of Florida	2	Orlando	Atlanta

[1]The number of animals received by each facility may change; however the total number of belugas proposed for importation would be no more than the 18 animals identified in the application.

Transport time from the pools at UMMRS to the pools at the final destinations is anticipated to be between 23 to 30 hours. Import of these animals would be conducted in full compliance with the guidelines of the International Air Transport Association, Live Animals Regulations (IATA LAR), the *CRC Handbook for Marine Mammal Medicine* (Dierauf and Gulland 2001), the Convention on International Trade in Endangered Species *(CITES) Guidelines for Transport and Preparation for Shipment of Live Wild Animals*, and all other applicable regulations, standards, and conditions set forth under the AWA and MMPA. During all legs of transport, the animals will be accompanied by veterinary and husbandry staff from either UMMRS or Georgia Aquarium.

A health assessment would be conducted within 10 days prior to transport verifying that each animal is healthy enough for transport. This assessment would evaluate each animal for disease or illness, and females would be checked for pregnancy or lactation. The animals would be trucked to the Anapa Airport and loaded onto three cargo aircraft for the flight to Liege Airport, Belgium (approximately 2.7 hours) (Table 2). The animals would be shifted to two cargo jets for the flight to the United States. This change of planes is necessary due to airplane restrictions in both Russia and the U.S. One plane would be flown to Atlanta Hartsfield International Airport (7.8 hours) and the other to Chicago O'Hare International Airport (9 hours).

From the Atlanta flight, a subset of the animals would be trucked to the Georgia Aquarium. The remaining animals on this flight would be flown to Orlando and San Antonio and trucked to the associated Sea World parks. From Chicago, a subset of the animals would be trucked to Shedd Aquarium and the rest would remain on the aircraft and be flown to San Diego and trucked to the Sea World of California.

Table 2. Transport Mode and Duration for Steps in the Importing Process

Origin & Destination	UMMRS to Anapa Airport	Anapa Airport to Liege Airport	Liege Airport to Chicago/Atlanta	Chicago/Atlanta to Receiving Facility
Mode of Transport	Overland travel by truck	By air via 3 IL-76 cargo aircraft	By air via 2 Boeing 747 cargo aircraft	Transported by ground (Georgia and Shedd) and air/ground (Sea World parks)
Time of Transport	90–120 minutes	2.7 hours	9 hours to ORD / 7.8 hours to ATL	Regardless of facility, transport will not exceed 5 hours

All of the animals would receive immediate and continuous evaluation and monitoring upon their arrival to ensure acclimation. This may include a suite of medical procedures. All facilities have quarantine capabilities; however, decisions to quarantine the animals would be made by each institution's respective veterinary staff. Each of these animals would be incorporated into the education/conservation programs of each individual facility and participate in the breeding program established among the institutions.

The beluga whales proposed for import were collected during the field seasons of 2006, 2010, and 2011 and have been and will continue to be maintained at UMMRS until the permits are issued to import the animals into the U.S. The whales are fed a diet similar to the captive beluga whales currently at the Georgia Aquarium. The animals are monitored by veterinarians and are cared for by animal trainers.

Collection of the Beluga Whales: The proposed action does not include the collection of beluga whales, only the importation of already captive belugas. A brief summary of the collection methodologies as described in the application is provided below to address the issuance criteria as outlined in Section 1.0: Purpose of and Need for Action. The collections occurred on Baydukova Island in the Sakhalin Bay where belugas are known to forage in shallow water near shore. No animals were chased or driven into the shallows; instead the team only engaged animals already located in shallow waters or those voluntarily moving in the direction of shallow water.

Initial assessments determined the number and estimated ages of the animals present in the group as well as to identify any newborn calves, mother-calf pairs or juveniles less than one year old. Only groups with less than five animals present and those groups without mother–calf pairs, calves, large adults, or juveniles less than one year old were engaged. Once a suitable group of whales was identified in sufficiently shallow water, a seine net was dropped between two boats and used to encircle the animals. A second assessment of the animals swimming inside the seine net was conducted. If animals not intended to be targeted were in the group, all of the animals were released. If the net contained the appropriate number and composition of target animals, one boat sailed for the nearby beach of Baydukova Island where the net was pulled in by hand, simultaneously decreasing the diameter of the net and moving the whales into shallower waters. During this time, small boats were positioned to observe for entangled whales and to assist as necessary.

Animals selected for collection were transferred to a soft net stretcher, loosely secured along the sides of one of the boats, and transported the five miles from the collection site to the Chkalova Island camp. The animals were assessed by the onsite veterinarian and monitored in nearby shore-side net-pens where they were cared for approximately two months to acclimate before being transported to the UMMRS.

Transport to UMMRS: The applicant provided a detailed description of the transport of the animals from the collection site to the UMMRS facility and a brief summary follows. Further details regarding the transport can be found in the application associated with this EA. The transport of the animals from the temporary holding pens on Chkalova Island to UMMRS was conducted in accordance with professionally accepted standards and techniques in compliance with all applicable regulations, standards, and conditions set forth under the AWA, MMPA, CITES, US Fish and Wildlife Service (USFWS) regulations, USDA regulations, and IATA LAR. The transport employed all contemporary and accepted methods outlined in the *CRC Handbook of Marine Mammal Medicine,* Second Edition (Direauf and Gulland 2001).

Prior to transport the animals were examined by the onsite veterinarian to ensure the animals were healthy enough for transport. Specifically, the whales were examined for any disease or illness and the females for pregnancy or evidence of lactation. From Chakalova Island, the whales were transported individually or, in some cases in pairs, by helicopter to the Nikolaya-na-Amur Airport (approximately 10 minutes). The animals were flown (three at time) from the Nikolaya-na-Amur Airport to the Anapa Airport on the Black Sea coast, (approximately 16 to 18 hours - not including refueling stops). The whales were trucked from the Anapa Airport to the UMMRS (between 90 – 120 minutes) during the early morning or late evening when air temperatures were cooler.

Permit Duration
The proposed permit would be valid for five years from the date of issuance. A single one-year extension of the permit may be authorized and would be considered a modification, pursuant to NMFS regulations at 50 CFR §222.306.

If granted, a one-year extension of the permit would allow the importation authority to be carried forward into a sixth permit year. The extension would not change any other terms or conditions of the permit. NMFS does not consider a one-year extension of this nature to represent a substantial change to the proposed action that involves changes in environmental impacts. As such, NMFS would not prepare a supplemental EA for the one-year extension unless substantial new information or circumstances relating to environmental impacts is available (e.g., a change in the status of the beluga species).

3.0 AFFECTED ENVIRONMENT

Location
The proposed action is to authorize the importation of captive beluga whales from UMMRS in Russia to five public display facilities in the U.S.

Biological Environment

Affected species/stocks:
The applicant's import activities would be directed at individual marine mammals currently held in captivity at UMMRS. The animals proposed for importation have already been removed from the biological environment; however, their removal from the wild is discussed as part of the affected environment. A brief description of beluga whale biology, distribution and current threats is provided below.

Beluga Whales (*Delphinapterus leucas*)

Beluga (or white) whales are small toothed whales, which are distributed around the Arctic inhabiting subarctic regions of Russia, Greenland, and North America. They are found in the Arctic Ocean and its adjoining seas, including the Sea of Okhotsk, the Bering Sea, the Gulf of Alaska, the Beaufort Sea, Baffin Bay, Hudson Bay, and the Gulf of St. Lawrence. Belugas may also be found in large rivers during certain times of the year.

The general pattern for beluga whale distribution shows major seasonal changes. They winter in offshore waters associated with pack ice. In the spring, they migrate to warmer coastal estuaries, bays, and rivers where they may molt (Finley 1982) and give birth to and care for their calves (Sergeant and Brodie 1969). These migrations may cover thousands of kilometers (Reeves 1990).

The International Whaling Commission (IWC) has proposed 29 discrete beluga whale management stocks within their global range. The stocks relevant to the proposed action are three provisional stocks in the Sea of Okhotsk: Shelikov Bay, Sakhalin Bay/Amur River, and Shantar Bay (International Whaling Commission 2000).

Sea of Okhotsk belugas: The current IWC classification of the three provisional stocks in the Sea of Okhotsk – the Shelikov, Sakhalin-Amur, and Shantar "stocks" - was based on the geographical separation of summer aggregation areas. Shelikov Bay is separated from the Shantar and Sakhalin Bays by over 1,800 km, while the Shantar and Sakhalin areas are separated from each other by about 300 km (Figure 1).

The belugas proposed for importation were collected from the Sakhalin Bay stock. During the fall and winter, the geographic separation between the Shantar and Sakhalin-Amur aggregations appears to dissolve. Based on tagging data, Shpak et al. (2010) surmised that the western Shantar and Sakhalin-Amur groups could spend the fall and winter months together, which allows for the possibility for these stocks to intermix during the breeding season. Observations in 2009 and 2010 confirmed intermixing between the Sakhalin-Amur and Shantar aggregations, when individual female Sakhalin Bay belugas were observed in Nikolaya Bays in the Shantar area (Belkovich 2010). For this reason, a single beluga stock within the Sea of Okhotsk has been suggested by some researchers (Kleinenberg et al. 1964; Melnikov 1999).

Genetic Structure of the Sea of Okhotsk belugas: Genetic analysis of the three Sea of Okhotsk stocks supports both theories of a single stock and multiple stocks within this region. The most compelling evidence for multiple stocks is the mitochondrial DNA (mtDNA) analysis by

Meschersky and Yazykova (2012). While Meschersky and Yazykova's results found Sakhalin-Amur whales would be genetically distinct from Shantar Bay populations, they also found that differentiation among the four Shantar Bays was even greater, which would indicate the existence of at least five stocks over the western Sea of Okhotsk.

Support for a single stock can also be found in Meschersky and Yazykova's nuclear DNA (nDNA) results, which showed DNA similarities between the Sakhalin-Amur and Shantar aggregations, supporting a single stock concept (Cronin 2012). This could be the result of (1) females breeding with males from multiple aggregations, or (2) sharing a common ancestry and insufficient time for the nDNA, which evolves more slowly than mtDNA, to differentiate.

Sea of Okhotsk population estimates: Current population estimates calculate 3,961 belugas in the Sakhalin-Amur area and 6,661 for the Shantar area (Reeves et al. 2011). These estimates are based on surveys conducted in 2009 and 2010 (Shpak et al. 2011) and further reviewed by an International Union for the Conservation of Nature (IUCN) scientific panel of beluga experts (Reeves et al. 2011). The minimum population estimate for the Sakhalin-Amur population was determined to be 2,891 (Reeves et al. 2011) and further refined to 2,972 (Chelintsev and Shpak 2011).

Current Threats to Sea of Okhotsk belugas: The primary human-caused risks of mortality to Sea of Okhotsk beluga whales are probably entanglement in fishing gear and vessel strike. However, beluga entanglement in salmon and sturgeon fishing nets or traps is very rare, and belugas are exceptional among cetaceans in their ability to avoid entanglement (Reeves et al. 2011). Small fishing vessels make up the majority of vessel traffic in the Sakhalin and Shantar bays and there is no evidence of strikes between belugas and these vessels. Inquiries regarding subsistence or illegal harvest have yielded little data and, although these activities may still occur, it would be at very low numbers. Based on this information, human-caused mortality is not currently a significant factor in population dynamics of the Sakhalin and Shantar belugas.

Contaminant load variations have been used to differentiate other cetacean stocks (Dizon et al. 1992), including beluga whales in Canada (Department of Fisheries and Oceans 2010). At this time, no contaminant load studies have been done on the Sea of Okhotsk belugas. Likewise differences in external parasite loads have been used to identify separations in feeding grounds of Antarctic whales (Ohsumi et al. 1970). However, beluga whales are relatively free of external parasites (Klinkhart 1966), and internal parasite examinations can only be done on deceased animals. There is no information on parasite loading in Sea of Okhotsk beluga whales.

It is possible these stocks vary their summer diets given their separate aggregations. Analytical seasonal diet studies of these stocks have not been conducted, and the available data (presented in the application) show that all three stocks perform spring/summer shifts (smelt, herring, and salmon-based foraging) before returning to deepwater marine fish diets in the winter. Thus, there appear to be no major dietary differences that might indicate clear stock separation.

Figure 1 was copied from the application.

Evidence indicates that the Arctic climate is changing significantly and that one result of the change is a reduction in the extent of sea ice in at least some regions of the Arctic (ACIA 2004, Johannessen et al. 2004). Ice-associated animals, such as the beluga whale, may be sensitive to changes in Arctic weather, sea-surface temperatures, or ice extent, and the associated effect on prey availability. Currently, there are insufficient data to make reliable predictions of the effects of Arctic climate change on beluga whales, but Laidre et al. (2008) and Heide-Jørgensen et al. (2010) concluded that on a worldwide basis belugas were likely to be less sensitive to climate change than other arctic cetaceans because of their wide distribution and flexible behavior. Increased human activity in the Arctic, including increasing oil and gas exploration and development, and increased nearshore development, have the potential to impact habitat for beluga whales (Moore et al. 2000, Lowry et al. 2006), but predicting the type and magnitude of the impacts is difficult at this time.

Live Capture of Sea of Okhotsk belugas: Live captures of belugas for public display or research began at Sakhalin Bay in 1986, but the number of animals removed between 1986 and 1999 is unknown. Since 2000, the average number of animals removed has been 21.3 per year with no more than 33 removed in any given year. The annual quota is set by the Russian government and has been between 40 and 57 animals (Shpak et al. 2011).

Sea of Okhotsk PBR calculations: The Potential Biological Removal level (PBR), as defined under the MMPA, is "the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population." Essentially, the PBR is the number of animals in a stock that could be purposely or incidentally removed by human activities without prohibiting the stock's growth or recovery. NMFS does not manage the beluga stocks in the Sea of Okhotsk, therefore, has not calculated PBR for these stocks. The following PBR analysis was conducted by the applicant using the data obtained from Shpak et al. 2011.

During the summers of 2009 and 2010, Shpak et al. (2011) conducted aerial surveys in Sakhalin and Shantar Bays to calculate population estimates for these regions. The following PBRs were calculated from the Shpak data.

Table 3. Population Estimates and PBR Calculations

Aggregations	Minimum Population Estimate	PBR	Reference
Sakhalin Bay	2,927	29	Shpak et al. 2011
Sakhalin Bay	2,891	29	Reeves et al. 2011
Sakhalin Bay	2,972	30	Chelintsev and Shpak 2011
Shantar Bay	3,206	32	Wade and Angliss 1997
Sakhalin and Shantar Bays	8,632	86	Chelintsev and Shpak 2011

The average number of animals removed since 2007 has been 22 (Table 4), which is below the Sakhalin-Amur PBR of 29-30. There is no indication of any additional human-caused incidental mortality (Reeves et al. 2011), so incidental mortality has not been taken into account in the above calculations. If the Sakhalin and Shantar aggregations are considered as one stock, the annual quota set and the actual collection from the wild falls below the analytical PBR of 86.

Table 4. Number of Beluga Whales from Sakhalin-Amur Stock Live-Captured by Year

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Mean
Whales Collected	10	22	10	26	25	31	20	0	25	24	30	33	**21.3**

Source of years 2000–2010: Shpak et al. 2011
Source of year 2011: Mukhametov pers. comm. 2012

Non-Target Marine Animals
The action area is limited to the captive facilities that currently hold the belugas (UMMRS) and those that will receive the belugas (five U.S. public display facilities). No activities are being proposed in the wild. For these reasons, the effects on non-target species are not considered further.

Biodiversity and Ecosystem Function
The proposed action is the importation of captive beluga whales into the United States and no activities will occur in the wild. Furthermore, the receiving entities are all human-constructed facilities (i.e., no natural lagoons, pools, or sea pens) where natural marine ecosystems are not present, thus, there will be no effects on marine ecosystems. Therefore, the proposed action does not interfere with benthic productivity, predator-prey interactions or other biodiversity or ecosystem functions. The proposed action does not involve activities known or likely to result in the introduction or spread of non-indigenous species. Thus, effects on biodiversity and ecosystem function are not considered further.

Ocean and Coastal Habitats
The action area does not include designated critical habitat and the proposed action does not involve alteration of substrate, movement of water or air masses, or other interactions with physical features of ocean and coastal habitat. Thus, effects on habitat are not considered further.

Unique Areas
The action area is restricted to the exporting facility (UMMRS) and the importing facilities (Georgia Aquarium, Shedd Aquarium, and the three Sea World parks). Unique areas such as National Marine Sanctuaries or Essential Fish Habitat (EFH) would not be affected. The proposed action is limited to the importation of marine mammals and does not alter or affect

unique areas, including any components of EFH; therefore effects on unique areas are not considered further.

Historic Places, Scientific, Cultural, and Historical Resources
There are no districts, sites, highways or structures listed in or eligible for listing in the National Register of Historic Places in the action area (i.e. the exporting or importing facilities). The proposed action is the importation of specific marine mammals that have already been removed from the wild and does not preclude other scientific, cultural, or historic uses of this species. Thus, effects on such resources are not considered further.

Social and Economic Resources
The proposed action does not affect distribution of environmental burdens, access to natural or depletable resources or other social or economic concerns. It does not affect traffic and transportation patterns, risk of exposure to hazardous materials or wastes, risk of contracting disease, risk of damages from natural disasters, food safety, or other aspects of public health and safety. Thus, effects on such resources are not considered further.

4.0 ENVIRONMENTAL CONSEQUENCES

Effects of the No Action Alternative
There are no direct or indirect effects on the environment of not issuing the permit. The importation of these beluga whales for public display purposes would not be exempted. The applicant would not conduct the import in the absence of a permit, because to do so would risk sanctions and enforcement actions.

Effects of the Proposed Action Alternative
Under this alternative, the permit would be issued with standard permit conditions. The permit would allow the importation of 18 beluga whales, as described in the permit application, to occur.

The issue most relevant to this analysis is the potential for impacts on the beluga species. The importation of these already captive animals would not affect the wild population; therefore it would not be expected to result in significant effects on the species or stocks of beluga whales. The importation of these animals is not expected to impact the annual quota for live beluga captures set by the Russian government. It is important to recognize that an adverse effect on a single individual or a small group of animals does not translate into an adverse effect on the population or species unless it results in reduced reproduction or survival of the individual(s) that causes an appreciable reduction in the likelihood of survival or recovery for the species.

Subsequently, mortality or reduction in the individual's likelihood of successful reproduction or survival would then have to result in a net reduction in the number of individuals of the species. In other words, the loss of the individual or its future offspring would not be offset by the addition, through birth or emigration, of other individuals into the population. That net loss to the species would have to be reasonably expected, directly or indirectly, to appreciably reduce the likelihood of both the survival and recovery of the species in the wild.

The 18 belugas proposed for import were removed from the wild in 2006, 2010, and 2011. Based on the calculated PBR for both the Sakhalin Bay and the combined Sakhalin/Shantar Bays, the current removal of the belugas from the Sea of Okhotsk is not impeding the stock's growth or recovery. A sustainability analysis of live-capture from the Sakhalin-Amur stock by the IUCN in 2011 (Reeves et al. 2011, Chelintsev and Shpak 2011) calculated a PBR of 29 to 30 individuals. This PBR is less than the average number of 21.3 animals per year that have been removed from the Sakhalin Sea since 2000. In addition, the collections were and will continue to be conducted under the oversight and authority of the government of Russia. Documentation provided in the application indicates that the collection methods were similar to techniques used by other scientific and regulatory organizations (Ferraro et al. 2000; Orr et al. 2000; Gales et al. 2009).

Effects of importation of the beluga whales: It is anticipated that the individual whales to be imported would experience short-term effects associated with the transport and later effects associated with captivity. The physical process of importation, including transferring animals from enclosures/containers, ground transportation, and flights, may result in some stress to the affected animals as evidenced by stress hormone studies (Schmitt et al. 2010, St. Aubin and Geraci 1988). St. Aubin and Geraci (1989), cited by Curry (1999), which recorded physiological changes associated with the collection and handling of beluga whales; however, most indices were reported to normalize within the first week of captivity, indicating that these are short-term stress responses.

Historically, aquariums showed low survivorship rates compared to animals in the wild; however, recent data (PMC 2010) indicates that the current North American captive beluga population has a uniform age distribution of animals up to 40 years old, with a maximum age of 69 years. A more detailed analysis by Willis (2012) shows the life spans of captive versus wild belugas to be comparable. Thus, the above analysis concludes that there is high confidence that health and life expectancy of the imported animals would meet or exceed values for wild animals.

Controversy

Federal agencies are required to consider "the degree to which effects on the quality of the human environment are likely to be highly controversial" when evaluating potential impacts of a proposed action [40 CFR §1508.27]. The application and draft EA for the proposed permit is being made available for public review and comment concurrently with the notice of receipt of the application and is also being provided to the Marine Mammal Commission (MMC) for review and comment. Issuance of the permit is not expected to be controversial based on potential environmental impacts.

Cumulative Effects

Cumulative effects are defined as those that result from incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (federal or nonfederal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions that take place over a period of time.

The current threats to the Sea of Okhotsk belugas are described in Section 3, the Affected Environment. As previously described, these belugas may be affected by hunting, entanglement, vessel strikes, and contaminants. However, these activities are thought to be occurring at a magnitude that would not drive population dynamics.

Collection of belugas from the Sea of Okhotsk is expected to continue in the future as described in Section 3. This capture is managed by the government of Russia and is not expected to impede the stock's growth or recovery according to the sustainability analysis of live-capture from Sakhalin-Amur stock conducted by the IUCN in 2011 (Reeves et al. 2011, Chelintsev and Shpak 2011).

The extent to which climate and/or ecosystem changes impact beluga whales is largely unknown and the greatest impacts of climate change on the species may not come directly from the effects of weather conditions, but rather indirectly from changing human activities resulting from regional warming and reduced sea ice. These indirect effects could include ship strikes, increased noise, chemical pollution, changing prey availability, unreliable ice refuges, competition and predation (http://cmsdata.iucn.org/downloads/fact_sheet_red_list_beluga.pdf).

There are no active permits which currently authorize the importation of beluga whales into the U.S., or other permits authorizing the direct collection of marine mammals from U.S. waters for public display. In addition, this application has been submitted with the understanding that all of the facilities holding belugas in the U.S. will be participating in the collective management of these imported animals. Therefore, it is extremely unlikely, but not impossible, for other marine mammal facilities to request a similar permit in the future. Each permit application received is evaluated on its own merits relative to the criteria established in the MMPA and NMFS' implementing regulations.

The proposed importation of 18 beluga whales is not likely to contribute to collectively significant adverse impacts on this species or the stocks these animals were collected from. The effects to the individual animals as a result of transport would be temporary and recoverable, associated with increased stress to the animals.

5.0 MITIGATION MEASURES

There are no additional mitigation measures beyond those that are part of the applicant's protocols or conditions that would be required by permit, as discussed in the description of the proposed action (see Chapter 2). The applicant's protocols are incorporated into the permit by reference.

In summary, the permit conditions specify the number of animals that may be imported and would require the applicant to report the import of the animals within 30 days. The permit would require the transport to be conducted in accordance with all applicable laws and regulations, including the AWA and CITES.

As described above in the Effects of the Proposed Action, it is likely that the beluga whales would experience short-term effects of transport and later effects associated with captivity.

These effects can be monitored through stress hormones and studies have demonstrated that the physiological changes associated with transport and captivity are short-term (i.e. most indices normalize within the first week of captivity). In addition, survivorship studies indicate that the life spans of captive versus wild belugas to be comparable. Based on data obtained from previous imports of marine mammals, including beluga whales, authorized under other permits, the types of mitigation measures proposed as part of the application are relatively effective at minimizing stress, pain, injury, and mortality associated with import.

6.0 LIST OF PREPARERS AND AGENCIES CONSULTED

Agencies Consulted
No agencies were consulted during the preparation of this EA.

Prepared By
This document was prepared by the Permits and Conservation Division of NMFS' Office of Protected Resources in Silver Spring, Maryland.

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